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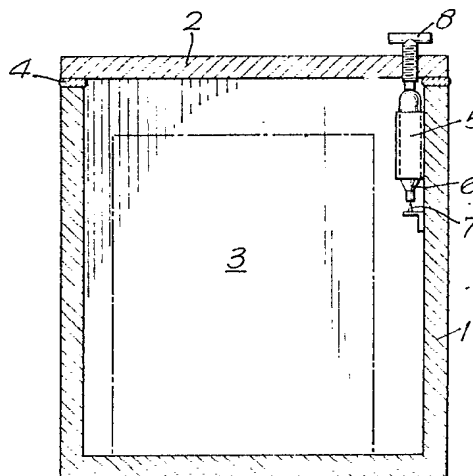
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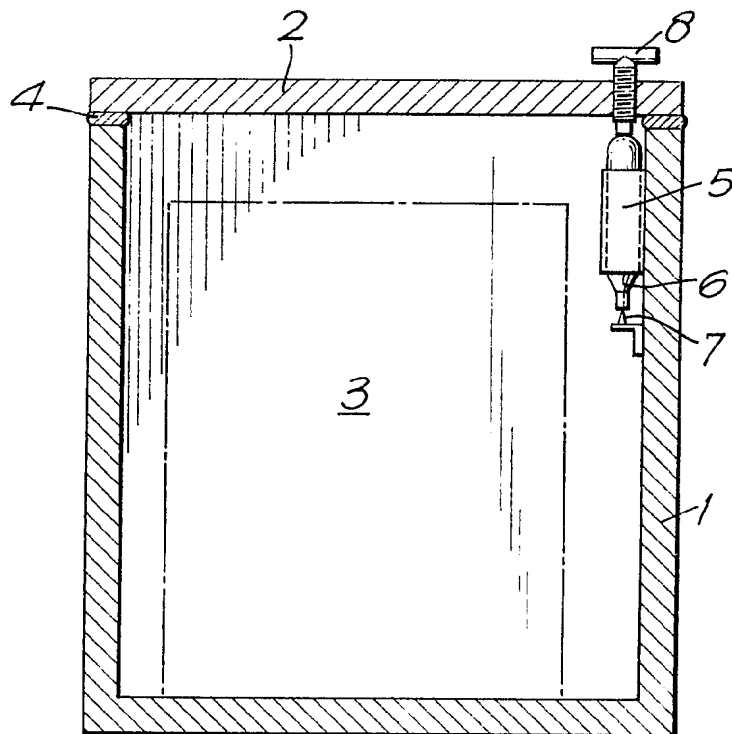
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(54) **Marine distress transmitter**

(57) A container for electronic equipment (3) of the transmitter includes a high pressure gap cylinder (6) the seal of which is ruptured by a piercing point (7) when the lid (2) is closed on the main portion (1) of the container, thus pressurising the interior of the container against the ingress of moisture.





## SPECIFICATION

**Marine distress transmitter**

5 This invention relates to a marine distress transmitter for automatic broadcasting of distress radio signals in the event of a marine disaster.

It is now common practice for aircraft, particularly civilian passenger aircraft, to be equipped with a so-called "black-box" flight recorder in which data concerning each flight, e.g. instrumentation readings and cockpit voice communications, are recorded. The flight recorder is also equipped with a radio beacon which is automatically energised in the event of a crash, thus aiding its recovery by rescue teams. The recorded data is then available to crash investigators who need the information to determine the cause of the crash.

It is now proposed that a similar device be fitted to ships, with special adaptation for the nature and duration of sea voyages. Such a device will be required to monitor and record voyage data such as course and speed, vital instrumentation data, radio communications and even data from the ship's radar. The device must be readily recoverable after an accident at sea and it must be designed to withstand the rigours of sea voyages in all climates and weather conditions, and to survive prolonged immersion in sea water, e.g. when released from a stricken vessel and subsequently left floating in the sea. Typically the device will contain the recording and emergency radio transmission equipment in a sealed container which will retain a positive buoyancy for several weeks without attention and yet which will be opened and resealed frequently, at the end of each voyage probably, to remove used recording medium and for service and maintenance purposes. Moreover, such opening and re-sealing will often be effected by non-skilled personnel, e.g. merchant seamen, who have no formal training in the handling of electronic hardware.

It is an object of the present invention to provide a container for electronic equipment which is readily opened and closed by unskilled personnel and yet which maintain a satisfactory internal environment for the electronic equipment and which also maintain a positive buoyancy for long periods of time.

According to the present invention there is provided a container for electronic equipment having a removable lid or closure whereby access to the interior of the container can be had, the container when closed being hermetically sealed, the container including means for automatically gas pressurising the interior when the lid or closure is in place.

An embodiment of the invention will now be described with reference to the accompanying drawing which illustrates a means for pressurising a container.

The container illustrated in the drawing comprises a main body portion 1 closed by a lid 2 and is designed to accommodate electronic equipment 3. The lid 2 is seated on a rubber gasket or like

sealing means 4 and is secured to the container by bolts or catches (not shown) in a conventional manner. Located in a bracket 5 affixed to the inside wall of the main portion 1 is a high pressure gas cylinder 6, such as is sold for pressurising soda siphons. The neck end of the cylinder 6 rests against a piercing point 7 also fixed to the inside wall. The lid 2 carries a screw or other force applying means 8 so that when the lid is secured in place force applied to the cylinder 6 causes the piercing point 7 to rupture the cylinder seal and cause the container to be pressurised. Note that only a small rise in pressure in the container is required to prevent the ingress of moisture etc. The screw 8 should be carried in a pressure proof gland (not shown) to prevent leakage.

Alternatively, the force can be applied to the gas cylinder simply by causing the lid to bear against the cylinder during the final part of the closure of the container. Thus when the lid is screwed down to compress the rubber gasket the final small movement of the lid is enough to cause the cylinder seal to be ruptured. This renders unnecessary a separate operation after the lid is secured in place.

Each time the container is opened, e.g. to remove and replace a recording device, the gas cylinder is also removed and replaced with a new cylinder.

It may be that the high pressure gas cylinder is not located in a bracket fixed to the container but rather it is affixed to or carried by a part of the equipment 3 which is to be removed and replaced. This ensures that the cylinder is automatically changed whenever the equipment is changed.

Yet again, the cylinder can be affixed to the underside of the lid, or affixed to the outside of the container and connected to its interior by a pipe hermetically sealed through the container wall or lid.

Preferably the container is provided with a pressure indicating means whereby the pressure in the container can be checked at a glance to ensure that there is sufficient buoyancy.

## CLAIMS

1. A container for electronic equipment having a removable lid or closure whereby access to the interior of the container can be had, the container when closed being hermetically sealed, the container including means for automatically gas pressurising the interior when the lid or closure is in place.

2. A container according to claim 1 including means for holding within the container a high pressure gas cylinder provided with a rupturable seal and means for rupturing said seal to effect pressurising of the container once the lid or closure is in place.

3. A container according to claim 2 wherein said rupturing means is adapted to rupture said seal automatically as the lid or closure is fastened in place.

4. A container according to any preceding claim

including means for indicating externally the internal pressure in the container.

5 5. A container for electronic equipment substantially as described with reference to the accompanying drawing.

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